

BROOKHAVEN NATIONAL LABORATORY Safety & Health Services Division INDUSTRIAL HYGIENE GROUP Standard Operating Procedure: Program Procedure	NUMBER IH93100
	REVISION Final Rev 0
Subject: LASER Safety Program Service Delivery	DATE 07/14/05
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1.0 PURPOSE & SCOPE

The purpose of this procedure is to document the role of the BNL organizations in the delivery of services that lead to an effective LASER Safety program. As a minimum, the BNL program will comply with ANSI Z136.1 – 2000, and DOE Directive 440.1A. This SOP documents program components not addressed in SBMS Subject Area *Laser Safety* and is a companion to that subject area and other organizational SOPs and documents.

2.0 RESPONSIBILITIES

- 2.1 The overall BNL program is implemented through the SHSD Industrial Hygiene Group Leader who assigns the duties to the BNL *LASER Safety Officer (LSO)*.
- 2.2 Members of the SHSD Industrial Hygiene Group, the Radiological Control Division Facility Support Group, Occupational Medicine Clinic, and the Training and Qualification Office, and line organizations fill certain roles in this program. This SOP does not confer any added responsibilities on a BNL organization, but does describe the current service delivery model in the BNL program and delineates the role each organization traditionally plays.

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2.3 The duties of organizations participating in the BNL LASER Safety Program traditionally include:

2.3.1 Radiological Control Division (RCD) - Facility Support (FS)

2.3.1.1 Evaluate tasks involving LASER equipment,

2.3.1.2 Coordinate reviews of laser installations/facilities with the Laser Safety Officer.

2.3.2 Training and Qualification Office (TQ)

2.3.2.1 Coordinate and assist in developing training material for equipment used at BNL,

2.3.2.2 Deliver training to laboratory personnel on hazards and proper use of LASER equipment.

2.3.3 Safety and Health Services Division (SHSD) - Industrial Hygiene Group (IH)

2.3.3.1 Serve as Subject Matter Expert (SME) for the SBMS *Laser Safety* subject area and site Laser Safety Officer (LSO),

2.3.3.2 Conduct an annual audit to insure compliance with the provisions of the program,

2.3.3.3 Assist RCD-FS in evaluating tasks and specifying the appropriate LASER controls for facilities and installations using LASERs,

2.3.3.4 Assist TQ in preparing training material,

2.3.3.5 Approve LASER devices for use at BNL,

2.3.3.6 Compile a site inventory of Lasers from line organization submissions.

2.3.4 Occupational Medicine Clinic (OMC)

2.3.4.1 Provide medical approval for LASER users,

2.3.4.2 Coordinate evaluation of medical problems related to LASER use.

2.3.5 Line organizations

2.3.5.1 Maintain equipment used for Laser Safety (such as interlocks, alarms, and warning signs),

2.3.5.2 Maintain an inventory of their Lasers,

2.3.5.3 Ensure that appropriate controls are in-place and that personnel are qualified for properly using Lasers.

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3.0 DEFINITIONS

LASER Safety Officer: A person, designated by the Industrial Hygiene Group Leader, to manage the documentation of the BNL site program, to oversee compliance with the DOE Orders and OSHA regulations on the LASER Safety program for BNL as a whole, and to lead start-up and “authorization to operate” reviews..

Associate LASER Safety Officer(s): A person, designated by BNL senior management or a line organization to oversee day to day compliance with the BNL LASER Safety program for an organization or BNL as a whole.

4.0 PREREQUISITES

none

5.0 PRECAUTIONS

none

6.0 PROCEDURE

Equipment: none

BNL maintains a LASER Safety program that contains:

6.1 Written Program:

- 6.1.1 The SBMS *Laser Safety* subject area specifies the requirements and duties for each division and department using LASER equipment.
- 6.1.2 This SOP specifies the activities for service providers.
- 6.1.3 Organizational level SOPs document activities performed by a select group of service providers on their portion of the total program.

- 6.2 LASER Safety Officer: The SHSD IH Group Leader designates a person, the BNL Laser Safety Officer, to maintain the SBMS subject area and have responsibility to oversee the BNL Laser Safety program. The role is responsible for arranging/conducting an annual appraisal of the program, tracking deficiencies and

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corrective actions, and conducting requirements management. This role is defined in detail in *IH93175*.

- 6.3 Medical Approval: The Occupational Medical Clinic (OMC) provides medical approval for LASER users.
- 6.4 Training: TQ develops and delivers awareness level training to persons using LASER equipment. Users of all LASER devices attend biannual refresher training courses conducted by TQ. TQ maintains records of this training.
- 6.5 Hazard Evaluation: The LSO in concert with the Divisions and department and Associate Laser Safety Officer(s), as needed, conducts area hazard evaluations prior to the start-up of laser operations.

7.0 IMPLEMENTATION & TRAINING

- 7.1 Only persons who have demonstrated competency, to the satisfaction of their management, are qualified to perform a role in this program. There is no qualification for this specific SOP, but the underlying activities conducted in support of this program may have training or qualification requirements.
- 7.2 Each supporting organization shall establish competency and qualification criteria for the tasks to be assigned to their personnel. Criteria must be in compliance with the *Laser Safety* subject area. Qualification criteria are established commensurate with the task to be performed. Records of qualification of service providers are documented and maintained by the service provider's organization management or BTMS, as appropriate.

8.0 REFERENCES

- 8.1 ANSI Z136.1: *American National Standard for the Safe Use of Lasers*.
- 8.2 DOE Directive 440.1A
- 8.3 Occupational Safety and Health Administration (OSHA); 29CFR1910.97, *Nonionizing Radiation*, 29CFR1926.54, *Nonionizing Radiation*.

9.0 ATTACHMENTS none

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10.0 DOCUMENTATION

Document Development and Revision Control Tracking		
Prepared By: <i>(signature/date on file)</i> C. Weilandics 11/15/04 Certified Industrial Hygienist	Reviewed By / Date: <i>(signature/date on file)</i> R. Selvey 07/06/05 Certified Industrial Hygienist	Approved By / Date: <i>(signature/date on file)</i> R. Selvey 07/14/05 Industrial Hygienist Group Leader
ESH Coordinator/ Date: <i>none</i>	Work Coordinator/ Date: <i>none</i>	SHSD Manager / Date <i>none</i>
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ISM Review - Hazard Categorization <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low/Skill of the craft	Validation: <input type="checkbox"/> Formal Walkthrough <input checked="" type="checkbox"/> Desk Top Review <input checked="" type="checkbox"/> SME Review Name / Date: C. Weilandics	IMPLEMENTATION: Training Completed: n/a Procedure posted on Web: 07/14/05 Hard Copy files updated: 07/14/05

Revision Log		
Purpose: <input type="checkbox"/> Temporary Change <input type="checkbox"/> Change in Scope <input type="checkbox"/> Periodic review <input type="checkbox"/> Clarify/enhance procedural controls Changed resulting from: <input type="checkbox"/> Environmental impacts <input type="checkbox"/> Federal, State and/or Local requirements <input type="checkbox"/> Corrective/preventive actions to non-conformances <input type="checkbox"/> none of the above Section/page and Description of change:		
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